

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-10 and 87-96 are currently pending. Claims 87-96 have been added; and Claims 1-10 have been amended by the present amendment. The additions and changes to the claims are supported by the originally filed specification and do not add new matter.¹

In the outstanding Office Action, the Title of the invention was objected to as not being descriptive of the invention; Claims 1-10 were objected to as failing to particularly point out the subject matter that Applicants regard as the invention; Claims 9 and 10 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter; Claims 1-4, 6, 7, 9, and 10 were rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Application Publication No. 2001/0010706 to Sato et al. (hereinafter “Sato”); Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato and U.S. Patent No. 6,590,902 to Suzuki et al. (hereinafter “Suzuki”); and Claim 5 was objected to as being dependent upon a rejected base claim, but was indicated to be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Applicants gratefully acknowledge the indication that Claim 5 includes allowable subject matter.

Regarding the objection to the Title of the invention, a new Title is submitted herewith. Accordingly, the objection to the Title is believed to have been overcome.

Regarding the objections to Claims 1-10, Claims 1-10 have been amended to clarify that the “/” operation indicates an “and/or” operation. No new matter has been added. Accordingly, the objections to Claims 1-10 are believed to have been overcome.

¹ See, e.g., pages 1, 8, 24, 26, and 35 of Applicants' specification.

Regarding the rejections of Claims 9 and 10 under 35 U.S.C. § 101, Claim 9 has been amended to be sufficiently tied to the image information encoding apparatus, and Claim 10 has been amended to be directed to a computer-readable storage medium. Accordingly, the rejections of Claims 9 and 10 under 35 U.S.C. § 101 are believed to have been overcome.

Amended Claim 1 is directed to an image information encoding apparatus adapted for encoding an input image signal at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive encoding image by orthogonal transform and motion prediction and/or compensation processing to generate image compressed information, the image information encoding apparatus comprising:

a motion prediction and/or compensation unit
configured to perform motion prediction and/or compensation
processing based on different interpolation methods with
respect to the interframe forward predictive encoding image
and the interframe bi-directional predictive encoding image,

wherein the motion prediction and/or compensation unit
includes a first filter and performs motion prediction and/or
compensation processing by using the first filter with respect to
the interframe forward predictive encoding image, ***and
includes a second filter and performs motion prediction
and/or compensation processing by using the second filter,
said second filter having a fewer number of taps relative to
the first filter with respect to the interframe bi-directional
predictive encoding image.***² [Emphasis Added.]

Claim 1 has been amended to recite that motion prediction and/or compensation processing with respect to an interframe forward predictive encoding image is performed by using a first filter, and motion prediction and/or compensation processing with respect to an interframe bi-directional predictive encoding image is performed by using a second filter having a fewer number of taps relative to the first filter.

² Please note that the discussion regarding independent Claim 1 also applies to independent Claims 9 and 10.

The Office Action associates the inter-field linear interpolation described in Fig. 9C of Sato with the formerly claimed motion prediction and/or compensation processing with respect to the interframe bi-directional predictive encoding image.³

Sato describes that a *single* two fold interpolation filter, such as a half-band filter, is used to generate a half-precision pixel, and a quarter-precision pixel is then generated from the half-precision pixel by way of linear interpolation.⁴ Therefore, in Sato, the motion compensation with respect to a bi-directional predictive encoding image is performed through linear interpolation.⁵

There is no disclosure or suggestion in Sato of using a second filter, having a fewer number of taps relative to the first filter, for motion prediction and/or compensation processing of the interframe bi-directional predictive encoding image. In fact, Sato relies on a different structure than the two-filter structure defined in Claim 1. Sato uses a *single* two fold interpolation filter that performs vertical and horizontal interpolation in a *single* step “at [one] time.”⁶

Thus, Sato does not disclose the two-filter structure of the motion prediction and/or compensation unit recited in independent Claim 1. Accordingly, it is respectfully submitted that independent Claims 1, 9, and 10 (and all associated depending claims) patentably define over Sato.

Regarding the rejection of dependent Claim 8 under 35 U.S.C. § 103(a), it is respectfully submitted that Suzuki does not remedy the deficiencies of Sato discussed above. Accordingly, it is respectfully submitted that dependent Claim 8 patentably defines over any combination of Sato and Suzuki.

³ See Office Action dated February 27, 2009, pages 7 and 8.

⁴ See Sato, paragraph [0038].

⁵ Id. at paragraph [0042].

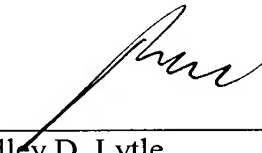
⁶ Id. at paragraph [0043].

The present amendment adds Claims 87-96 for examination on the merits. No new matter has been added. It is respectfully submitted that the features of Claims 87-96 distinguish from the features recited in Sato and Suzuki.

Consequently, in view of the indication of allowability, no further issues are outstanding and entry of the present amendment is believed to be in order. The present application is believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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